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AUTHOR Henning, Bradley; Stark, Timothy  
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## ABSTRACT

This action research project developed an intervention to determine and change the attitudes and beliefs about students and gender bias. Targeted population were freshmen through seniors in two high schools in a blue collar, middle class community in northeastern Illinois. The problems were identified by student surveys on attitudes and beliefs about whether they would want to have same or separate gender physical education classes. Analysis of probable cause data led the teacher researchers to look at student surveys and the socialization of faculty and students. The curriculum was modified and new standards were implemented to encourage cooperative learning strategies, trust, skill development, and lifelong learning. A literature review was conducted, and many expert sources were consulted. Some research stated students would learn better in an environment that is more homogeneous than heterogeneous. One of the commonalities, however, was the climate of the class and how safe the students felt to express themselves. Instructional strategies have been modified (including more small group instruction) in various programs with considerable success. Suggestions have been made to allow for staff development for awareness and to implement and design new curriculum units to better serve the nature of the students. Post-intervention data indicated that students do not perceive that there is an actual bias or problem with classes. Findings suggest that this research project should be continued to ensure that all students recognize and change their views on the state of the classrooms. (Contains 4 figures, 39 references, and 12 appendices with student and teacher surveys, forms, checklists, 4 sample team-building lesson plans, and data for analysis). (BT)

GENDER EQUITY IN A PHYSICAL EDUCATION CLASSROOM: A LOOK AT  
ACHIEVEMENT AND ENGAGEMENT IN A HETEROGENEOUS COEDUCATIONAL  
CLASSROOM

Bradley Henning  
Timothy Stark

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Partial Fulfillment of the Requirements for the Degree of Master of Arts in Teaching and  
Leadership

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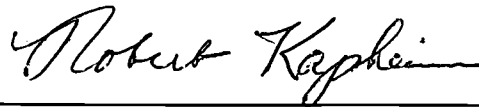
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SIGNATURE PAGE

This Project was approved by

 M.A., Ph.D. Candidate  
Advisor



Advisor

  
Dean, School of Education

## ABSTRACT

The research describes the intervention to determine and change the attitudes and beliefs about students and gender bias. The targeted population were freshmen through seniors in a blue collar, middle class community, located in northeastern Illinois. The problems were identified by student surveys on attitudes and beliefs about whether they would want to have same or separate gender classes.

Analysis of the probable cause data led the teacher researchers to look at student surveys and the socialization of the faculty and students. The curriculum will be modified and new standards will be implemented to encourage cooperative learning strategies, trust, skill development and life long learning.

A literature review was conducted and many expert sources were consulted. Some research stated that the students would learn better in an environment that is more homogeneous than heterogeneous. One of the commonalities however was the climate of the class and how safe the students felt to express themselves. Instructional strategies have been modified in various programs with considerable success. Suggestions have been made to allow for staff development for awareness and to implement and design new curriculum units to better serve the nature of the students.

Post intervention data indicated that students do not perceive that there is an actual bias or problem with classes. Data suggests that this study should be continued to ensure that all students are recognizing and changing their views on the state of their classrooms.

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## CHAPTER 1

### PROBLEM STATEMENT AND CONTEXT

#### General Statement of the Problem

Gender equity in large high school physical education settings is a national physical education concern (Humbert 1996). Some females and males feel left out, alienated and frustrated. Evidence of the problem includes teacher observation of the students in physical education class, lack of participation in team sport activities, frustration of skill development, and poor academic performances.

#### Immediate Problem Context

Site A and Site B are located in surrounding urban areas. They are the only high schools that service the surrounding communities. There is a boundary in the district to determine which school the students will attend. These two schools service eight surrounding communities made up of private and parochial feeder schools.

#### Site A

Site A has a total enrollment of 1,678 students. The following ethnic characteristics are listed by the following categories: 68.3 % Caucasian, 26.7 % Hispanic, 3.6 % Asian/ Pacific Islander, 0.8 % African-American, and 0.5 % Native American. Site A has an average attendance rate of 92.8 % with a chronic truancy rate of 1.1 %. This area is prone to a high

mobility of students (12.7 %) (School Report Card, 1999). The average class size is 22.0 and the school operates on a schedule of 50-minute classes with a 5-minute passing session.

The school originally opened in 1924, and has been undergoing many structural and facial improvements over the last 5 years. The school has a full service library with Internet access and a large CD-ROM database that educators can use to offer various modes of instruction. The library contains two classrooms that can be utilized for presentations or supplementary workspace for research projects. There are three computer labs for student use, three gymnasiums, a large weight-room with state of the art equipment, a pool, a large cafeteria, a distance learning center, and eight model classrooms that contain seven computers each that are Internet ready.

The school has a football field and track that are behind the facility. It is located on a busy street near the downtown area where the commuter and cargo trains pass by. The facility is located near an airport that has some flight patterns over the school. The school also owns its own buses. To ensure current trends of students, the school has recently installed a rock-climbing wall that can be utilized by the students during gym class. There are also team-building activities that are offered with the rock climbing class to ensure the students are working well in cooperative groups.

#### Site B

Site B has a total enrollment of 1,457 students. The following ethnic characteristics are listed by the following categories: 52.4 % Caucasian, 40.7 % Hispanic, 4.3 % Asian/ Pacific Islander, 2.5 % African-American, and 0.1 % Native American. Site B has an average attendance rate of 91.7 % with a chronic truancy rate of 4.9 %. The mobility rate is 8.2 % with an average class size is 21.1 (School Report Card, 1999).



This facility is in the process of structural and facial improvements to benefit the surrounding community and the students. The school originally opened in 1923, and has been undergoing many changes in the last couple of years. The school has a full service library with Internet access and a large CD-ROM database that educators can use to offer various modes of instruction. There are two computer labs that can be used by students throughout the day, two gymnasiums, a weight-room with state of the art equipment, a pool, a large cafeteria, and eight model classrooms that contain seven computers each that are Internet ready. The school has a football field and track that are behind the facility. The school is located on a busy street near the downtown area. A large airport is near the school that uses the school as a fly zone. There is a large park about a half-mile away that is utilized by some of the interscholastic teams. The school also owns its own buses.

With the assistance of the airport that is near the school, the school has applied sound proofing material to the windows and walls. The faculty and students were displeased when classes would be disrupted from the sound of planes flying over the school. This year, the school has re-roofed the gymnasium and installed a new floor in the upper gym. Next year, the school will be installing a new track and football/ soccer field. The main hallway and commons were re-tiled this year and the inner quad area has been groomed with new trees and shrubs. The hallways are also lined with new lockers for the increasing student population. Finally, the district will be increasing the size of the fitness center and bringing in new equipment for the faculty and students.

### The Surrounding Community

Site A and Site B are located in neighboring communities whose demographics and socio-economic status share some similarities and some differences.

### Site A Demographics

Site A has a population of 17,944. The median home value for this area is \$131,091. The median age is 36.8 with an age distribution that favors the 1-13 and 19-29 demographic areas (35 % total). The people of the town can be classified as blue-collar workers with an average family income of \$47,281. Currently, 11.6 % of the people are at the poverty level. The town comprises mainly a Caucasian (78.0 %) and Hispanic (20.6 %) population. Sixty nine and nine tenths percent of the people have a high school diploma or less (Tribune Profile, 2000).

Administrators and parents characterize the citizens of the community as being hard workers and dedicated to the school system. However, there is a low turnout of parents at parent teacher conferences, which indicated that either the parents have to work extra jobs or they are apathetic about their student's academics. Currently, there is a police liaison between the school and the police station. This officer is present at school and works very closely with the deans at the school.

### Site B Demographics

Site B has a population of 11,643. The median home value for this area is \$124,094. The median age is 37.1 with an age distribution that favors the 1-13 and 19-29 demographic areas (35.3 % total). The people of the town can be classified as blue-collar workers with an average family income of \$50,149. There are currently 9.4 % of the people at the poverty level. The town comprises mainly a Caucasian (79.0 %) and Hispanic (15.8 %) population. Seventy and one tenths percent of the people have a high school diploma or less with only 12.9 % of the people obtaining some form of degree from a college (Tribune Profile, 2000).

Like the people at site A, they are characterized as being hard workers and dedicated to the school system according to the administration. There is a low turnout of parents at parent

teacher conferences, which indicated that either the parents have to work extra jobs or they are apathetic about their student's academics. The students transcribe this apathy into the classroom and associated discipline problems. Some of the problems can be contributed to the number of single parent families or where both parents work two jobs and separate shifts and the students are left to tend to their younger siblings.

Currently, there is a police liaison between the school and the police station. This officer is present at school and works very closely with the deans at the school. There is a small problem with gangs at this school and the students have to follow a stringent dress code with outlawed color combinations. Students are sent home or given gym shirts to change into. The deans enforce the rules and policies on any students who are associated with gangs.

#### District

Both schools operate on a schedule of 50-minute classes with a 5-minute passing session. Lunch periods are 25 minutes each and there are 4 separate lunch periods in the middle of the day. Every Wednesday, there is a 25-minute school wide reading period at the beginning of Period 4.

To service the large number of students, there are 190 teachers in the district. The ethnic background of the instructors is as follows: 95.8 % Caucasian, 4.2 % Hispanic, 0.0 % African-American, 0.0 % Asian/ Pacific Islander, and 0.0 % Native American. The gender ratio of the teachers is 51.6 % male to 48.4 % females. The average teaching experience for the district is 15.3 years with 70.0 % of the teachers earning a master's degree or above. The average teacher salary for the district is \$67,872, while the average administrator salary is \$121,766 (School Report Card 1999). Over the past 2 months, the school system has gone through contract negotiations. Some of the issues that were discussed dealt with teacher salaries, benefits such as

Teacher Retirement Service (TRS), medical insurance, classroom size, and release time for teachers. The contract has been ratified and needs to be approved by the Board of Education to be implemented next year. The second major issue for the instructor is the usage of the reading period on Wednesday's. The problem is the loss of student participation and time on content specific curriculum. This is a major concern for the core courses because of the new state and federal guidelines and benchmarks.

The concept of Period 10, which was started about 10 years ago, and has had limited success. Most students do not view Period 10 as a help session, but rather as a disciplinary session to clear referrals or detentions given to them by the staff. This time is not utilized for extra one-on-one tutoring from the teacher. The staff has noticed that most students will only attend the last couple of weeks only if it will make a difference in passing the quarter or semester. This illustrates the apathy of the students and their overall performance in their course work.

During the past couple of years, the school has been eliminating "low track" classes from the curriculum. The administration and faculty feel that the students are not challenged in these classrooms and want to provide the best education available for the students. Various curriculum projects are conducted every year to ensure that the school's curriculum is in line with the state and federal standards.

#### National Context of the Problem Statement

The question has arisen of whether students are treated fairly or whether they have the same opportunities as other students in regard to gender equity. This debate does not only take place in content specific classes but in the area of physical education (PE). Title IX mandated coeducational classes and the best opportunities for all students in a given classroom. However,

there is a difference between intensity levels of females and males during a PE class. Most girls are reluctant to sweat and are fearful of looking foolish in front of the boys (Hedlund, 1999).

Hedlund also contends that there are some sport activities where it is beneficial to have a coeducational class. The skill of the students is the largest question. Is it more important to learn how to dribble with your weak hand or how to tackle a person compared to dancing or the social aspects of males and females (Dittmer, 1998)? When PE classes become optional, there is a large drop-off in enrollment between males and females (Humbert, 1996). The media have created an image of the “perfect” woman and this frightens many high school girls because of the negative body image that they have (Humbert, 1996).

In the classroom, boys tend to dominate the time of the instructor and therefore drive the attention of the instructor (Sadker, 1999). Some instructors are unaware what they are doing in the classroom could actually be perpetuating gender bias. Staff development and teacher education do not prepare teachers to identify the unintentional gender biases in a classroom (Sadker, 1999). There are even middle schools that are addressing this problem by segregating the students throughout the day because of sexual harassment (Coles, 1998). The middle school in Tyler, Texas showed videos to the students and had speakers concerning sexual harassment and inappropriate behaviors. These measures did not work and the administration made the decision to go to separate classes, even when walking down the hall (Coles, 1998).

Regardless of the age of the students, the students themselves already determine perceptions of the people in the schools. They need to have the support at home and in school in the proper ways to handle the relations between boys and girls at school (Cullingford, 1993). Beyond the walls of schools, these life skills will help the students in a market driven economy

that is concentrated on team strategies and cooperative groups in the business world (Parker, 1996).

The beginning of the new millennium brings a lot of responsibilities of the youth for a prosperous future. The next step in integrating schools and the attitudes of students is to address how the physical activity programming is done (Henderson & Bialeschki, 1995). With a society perpetuating in separate but equal or equality for both sexes, a women only curriculum is not the means to the end (Henderson & Bialeschki, 1995). This sort of curriculum drives the ultimate outcome of equality off to the side and perpetuates the nuances of gender inequalities from societal views.

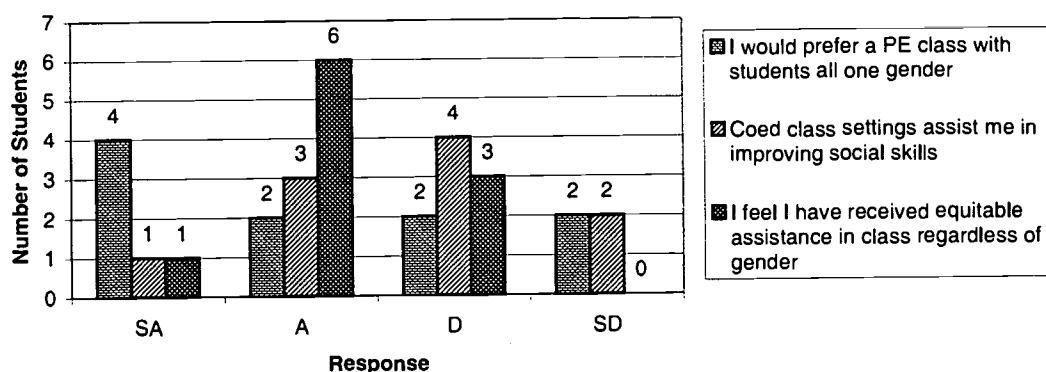
Could gender bias still exist in the model classrooms of today? If gender differences do exist, what lessons are the students learning? If the students perceptions are that females are not as important as males in the world, than teachers have not succeeded in making a future that is truly equal for all. Those students will not be able to survive in the business and social world because of their inadequacies in relationships with people. However, would a segregated classroom prepare these students for the future because they can hone their specific skills without any reservations of embarrassment from a student of a different gender? The most difficult portion of this equation is not the answer; rather it is the question that the researchers are searching for that will provide some insight into this situation. Regardless of the outcome, the major objective as a pedagogue is to ensure the best possible education to the students in a safe environment for them to grow physically, mentally, and socially. To achieve the proper portions of each will ensure their future success in lifetime relationships.

## CHAPTER 2

### PROBLEM DOCUMENTATION

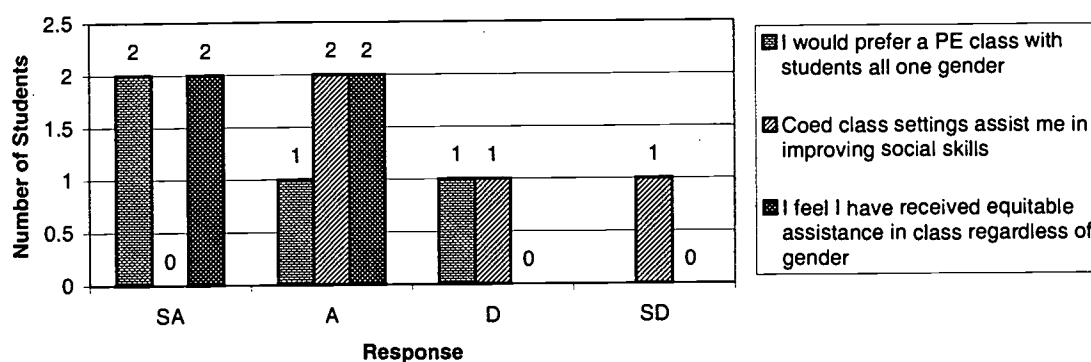
#### Problem Evidence

To provide evidence that a problem exists in the area of discrimination or bias in the classroom, the teacher-researchers will interview 15 students. The teacher-researchers will look at the scores on various assessments including the unit on team building. The anecdotal records will yield the information needed to highlight one issue at our school. A further look at the questionnaires that the students will complete will compile some probable causes for this session. Figure 1 represents the students' opinions before the intervention



**Figure 1.** Baseline data: Strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD). This chart represents the 10 female students surveyed and their beliefs prior to intervention. The data suggest that females feel more comfortable in a separate gender class.

Six out of 10 females would prefer to be in a same gender PE class while 6 out of 10 also responded that they do not think that coeducational classes improved their social skills. Seven out of 10 thought that the teachers were being equitable in their instructional time between males and females.



**Figure 2.** Baseline data: Strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD). In this study, there were only 4 males that participated in the research. Three of the 4 males would prefer to be in a same gender PE class. Two students agree and 2 disagree that coeducational settings increased their social skills, compared to 7 out of 10 for the girls. All the males agree that they received equitable time from the teacher in class. So the perception of the students is that the teachers are meeting the needs of the students.

Anecdotal records were kept on how the students felt during the “traditional” sporting events in class such as basketball. During the basketball unit, the students in the study were examined in coed teams and then on same gender teams. They were evaluated based on their participation and their skill development. In coed games, the 1 male and 2 female students were rated lower than when they were in a separate gender game (Appendix G). Either the



competitiveness of the game or the confidence of the students was not evident during the coed games; however, they displayed good skills during the same gender games.

Discussions with the students also led to comments about how the students enjoyed class. Before intervention and team building with the juniors and seniors, some students said, "They do not enjoy playing the traditional sports" and "We don't get to know people in the class well because we are interacting with the same people all the time."

The PE faculty was surveyed and the responses that were received show that the faculty would like to see an all female and all male section of PE.

#### Probable Causes

To determine whether a bias exists, the researchers must first look at the socialization of the students, faculty, and parents. Some students come from divorced families or separated families. Without a stable family for the students to find values, the students rely on their friends to form some of their opinions. Teachers have to work on the students' attitudes and beliefs about other students especially in the area of verbal abuse.

The verbal abuse in the hallways and the classrooms dictate the atmosphere in the school. Self-esteem and confidence are two things that most of our students do not walk through the doors with. Given the physiological differences between males and females especially in the amount of adipose tissue, adolescence can be difficult for females to formulate positive self-images of themselves (Schultz & Smoll, 1990). Schultz and Smoll conducted an experiment using three groups of students at grades 3, 7, and 11 and found that during adolescence, females on average tend to have approximately 24 percent body fat in comparison to approximately 14 percent in boys. The socialization of the two sexes will lead to girls feeling that they are incapable of doing the activities or feeling that they have to look a certain way to attract the

boys. Female athletes are more prone to eating disorders during this time because they want to get “ideal bodies” according to society (Rhea, 1998). Students enrolling from single sex schools may have not seen the stereotypes that exist for the other gender while students at coeducational schools would have seen these stereotypes and preferences by both male and female students (Colley, Comber, & Hargreaves, 1994).

Schools are an ever-changing sea of physical, psychological, and physiological changes that our students must engage each day. Students entering the secondary years of school have many perceptions about the academic and the social life of school. Most of the pressure on the students is how well they fit in with the other students especially the opposite gender. Since 1972, Title IX has provided a basis that there should not be segregation between males and females in the classroom. Despite Title IX, the perception of unequal gender roles in the school cannot be hidden. Each person walking into the school has a perception of the opposite sex. This belief system starts from the early stages of their development. The societal belief that all boys are better than girls will be subtly, yet firmly reinforced with gender stereotypes (Hedlund, 1999). Most males believe that they should be involved in classes and activities that will allow them to display their speed, skill, and strength. This transforms into a display that they are more dominant over women because they are stronger than they are, not mentally but physically. This transcends into the belief system that males need competition to feel like they have accomplished something where women can enjoy an activity while socializing. The sexes are motivated differently and succeed with different approaches (Humbert, 1996). The perception of physical education is different for boys and girls. The boys want to have an environment that fosters competition where the girls enjoy being with other girls and feeling less pressured to “perform” for boys (Streitmatter, 1998).

The early belief systems of the students are evident when they begin to participate in team sport activities or even in their content classrooms. Males generally dominate the amount of questions and time of the instructor. Gender bias exists in every classroom, albeit unintentionally (McKuen, 1998). McKuen states that some content teachers have acknowledged that they had not realized how much more often they called on their male students. The girls in the classroom usually suffer the consequences of not having class time to learn content materials, drills, or time in team play activity.

Some view physical education as a hindrance to keeping their beauty during school. Vigorous and competitive sports are undesirable and unfeminine for women (Chepyator-Thomson & Hutchinson, 1995). Some girls complain that there is not enough time to change or apply make-up before they go back to class. The belief system that a boyfriend is a status symbol perpetuates the thinking that women will never be as good as males because United States (U.S.) culture stresses males as the stronger and dominant sex (Chepyator-Thomson & Ennis, 1997).

Lirgg and Sinclair (1991) conducted a study and found that males and females liked PE because they could stay healthy and in shape. Also, other male and female students indicated that they did not like PE or participate because they did not view themselves as athletic or having skills to contribute to the class.

A challenge in the curriculum is to alleviate sex-segregated classes and provide better educational opportunities for the students. A negative reaction to this is how the students perceive their interests and capabilities (Griffin, 1985). Besides PE being coeducational, the school itself has an impact on the stereotypes and the perceptions of the opposite sex. There is

some evidence to support that less gender stereotyping exists in single sex schools (Colley, Comber, & Hargreaves, 1994).

The curriculum exacerbates this situation of girls fearing class and therefore their lack of participation. Girls are usually not allowed to participate in contact sports with the males for fear that they will get injured or that girls in the class will verbally abuse the girl (s) who participate. Wright (1996) asserts that there is an inherent difference biologically with males and females especially with self-efficacy that need to be addressed by the curriculum. Females are usually viewed by males as sexual beings versus being treated for the traits that they possess. Also, most males view activities like dancing with contempt and usually verbally abusing any males who participate in the activities (Wright, 1996). Analyzing skill levels have become more difficult due to the increasing number of alternative courses such as wall climbing, skiing, and bicycling (Chambers, 1988). Geadelmann (1981) suggests that the curriculum offerings for males and females has not expanded, in some cases, it has gotten smaller with the focus on more male dominated sports activities instead of offering other types of sports (gymnastics, swimming, etc.) to both males and females.

The teacher has a direct influence on the curriculum and the hidden agendas by some teachers to downplay female roles. Nilges (1998) conducted a study in which she looked at the liberal feminist model of teaching PE versus the radical feminist model of teaching. The liberal feminist model viewed the instructor as a facilitator by providing students with equal access to gender integrated environments. The effort of the student should be the determining part of their grade. However, the radical feminist model that Nilges researched promotes the teacher being directly involved with the success of the students. This model has the students examining the politics of gender construction and the differences associated with social reconstruction (Nilges,

1998). Female PE teachers are usually seen not as feminine as other women in other positions (Paechter & Head, 1996).

The different skill levels of students should not perpetuate the beliefs that some students are better than others. Instead, instructional design should embrace the different skill levels of students or ability grouping (Arrighi, 1985; Griffin, 1985). When similar ability students are grouped together, they are more willing to help each other on skill development and not degrade each other for not being able to understand or learn a drill (Arrighi, 1985). The teacher needs to create an environment that fosters skill learning and competitions apart (Griffin, 1985).

Although traditional methods of dividing students are simple, this practice is counterproductive to the class. Traditional methods of combining the students do not take into account the experience level, skill, or aptitude of the students (Chambers, 1988). Classification by sex has been used in cases where students may need to be separated during contact sports during competition or when skills need to be developed by small ability groups (Chambers, 1988)

## CHAPTER 3

### THE SOLUTION STRATEGY

#### Literature Review

Having a goal orientation where the effort given and the outcomes parallel the objectives are essential to a well-motivated class. Learning, effort and success must have a positive perception of value for students to be motivated in the classroom (Valentini, Rudisill, & Goodway, 1999). To promote this model, students need to have ownership in their development as well. The teacher must provide feedback for the students, give instruction and have opportunities to work on skills (Griffin, 1985). When the students finish school, they should want to continue being active in sports or other physical activities. Positive experiences in athletics and PE will enhance the participation and the performance of the students by promoting a life-long relationship with a skill (Rhea, 1998).

In the discussion of gender equity in or outside the school, educators must look at a couple of topics. The perception of fair or unfair, especially when it comes to males and females, is becoming more of a topic both in schools and in the business world. In the realm of a school, there are four topics of change that the researchers would like to discuss and look over as possible means to allow for a narrowing of the gender gap and perceptions once the students leave the schools. The topics are teacher solutions, classroom environment, students, and curriculum.

Usually when a bias exists over a group of people because of their race, creed, sexual orientation, etc. they are usually determined by an existing belief system for that person or persons. From a young age, males are taught that they must show masculine traits to show their worth in society and to the less dominant female species. What researchers have to recognize is that the concept of masculinity and femininity are social constructed and historically based on social class (Parker, 1996). Males generally are more competitive than females and this fosters an environment that is counter-productive for skill development in all the students.

With a lack of decorum by the males towards the females, most of the females regress into small groups and avoid the males. Both male and female students need to recognize the fact that they are biologically, psychologically, and physiologically different (Pfister, 1994). Rhea (1998) states that adolescent girls have low self-esteem because of secondary sex characteristics that develop especially an increase in the percent of body fat. Speed and power should not be the only determining factors in estimating a student's worth in a physical education class. However, through positive experiences in the classroom, the students will have more confidence.

One of the biggest problems for females is the urgency that they have to be socially accepted. This usually comes from being attractive enough to have boys notice her. Ashenden, Kessler, Connell & Dowsett (1985) believes that this is a problem for females because they are fighting a system of beliefs where they must appear "beautiful" at all times in order to be socially accepted by other girls but also the boys. Sometimes the self-perception students have about PE is the reason why they do not take it after the mandatory 3 years in high school.

If females do continue on in PE, they sometimes do it because it keeps them in shape or keeps them looking good (Luke & Sinclair, 1991). Luke and Sinclair continue by saying that even some males dislike PE because they feel unhealthy or they just could not keep up with the

class. We need to stop viewing females as “fragile encumbrances rather than living manifestations of action and intention” (Nilges, 1998). When speed, strength, and aggression are alleviated from the competitive classroom, women are more apt to participate for the fear of mimicry and harassment is almost eliminated (Smeal, 1994).

In studies that have separated males and females during team sports like basketball or soccer, results have shown that most females like the same sex environment. Lirgg (1994) conducted a study that showed females preferred the same sex classroom because they perceived a higher level of involvement and skill development. However, the approximately thirty percent of the males preferred to be a co-educational class versus being the same sex class. This was in part due to the competition level that existed in the class and some of the males stated that they were more involved in the co-educational classes (Lirgg, 1994). Given this set of information, it would seem reasonable to presume that females feel less intimidated when they are around other females and thus can work on development their skills with peer help. An increase in skill development for both males and females is linked to the ability to partner up students of the same skills and providing for a secure environment in which to flourish; which indicates gender is not an issue when boys and girls are grouped according to similar ability levels (Thomas, Michael, & Jere 1994).

There are some male students that have stated that they are unfairly treated in classroom situations because they are stereotyped as being loud and portraying disruptive behavior (Cullingford, 1993). Research supports the claim that it does not depend on the gender of the instructor only in the matter of how he/she treats the students. The students will always “test” the teacher to see how far they can bend the rules, but a good teacher will not let either male or female student swing too far away from the decency of the class. Students can identify



prejudices that exist in the classroom and in their own lives. The easiest way to eliminate bias of any nature is to treat individuals equally and allow them the opportunities to be active in learning and the abilities to interact with each student. (Marshall, 1997).

Without any prior knowledge of the students in the researchers' classes, the first time that the teacher-researcher sees their students is the first day of class. From the onset, the classroom will have a personality of its own and must harbor an environment that is conducive to a positive learning environment. One of the first things that the classroom must dictate is the notion that there will be a friendly environment and not the competitive atmosphere that is destructive to some classes (Streitmatter, 1998). This friendly atmosphere should pertain to all aspects of the course to foster friendships and better communication between students. Students need to be able to try and break their stereotypes of males and females as either dominant or submissive. The classroom can help to foster changes in their cultural and social beliefs especially if the environment fosters team effort and group problem-solving skills (Chepyator-Thomson & Ennis, 1997).

Smeal (1994) states that the environment should foster and build cooperative structures into learning physical education to enhance the emotional safety of the students. The most basic of the emotional needs for the girls is to eliminate the notion that they are just sexual objects to look at especially when they are swimming or running. Humbert (1996) believes that there needs to be an elimination of the walk from the pool to the changing area and that the changing area should have adequate space for both changing and showering.

Curriculum choices needed to be modified and specialized to allow for equal opportunities for both the males and females. Dyson and O'Sullivan (1998) discuss a program that was modeled after the reform movement from "A Nation at Risk" called Project Adventure.

This program is currently being used by junior high schools and the program has over night adventures, problem solving, team building, and goal-setting contracts as part of the program. This curriculum is interdisciplinary in nature and allows the students to foster positive beliefs about all the students in the class and the school (Dyson & O'Sullivan, 1998).

Within the walls of the classroom, the teacher must foster and harness the relationships between his or her students from the first day. If the teacher notices that another group is targeting a student or students, they can pull both groups of students together and discuss the concerns. This type of engagement by the instructor will help to foster positive situations where the instructor can allow the students to critically view their misconceptions about the other gender (Chepyator-Thomson & Ennis, 1997). The epitome of a patriarchal class would allow for a poor student-teacher relationship and the relinquishment of power in the class.

The main driving forces behind all classrooms are the objectives that need to be met and the curriculum that drives these objectives. As a parallel to the classroom, the curriculum must foster a student-centered approach that will engage them to learn life long processes and skills. Teachers need to diverge away from rote memorization and the endless number of lectures that they give. Students are engaged in the lesson will learn as much from their peers as they will from the lesson (Bagihole & Goode, 1998).

With higher demands being placed in placement scores and achievement, all core curricula need to be aligned with the state and federal guidelines. With the alignment of the curriculum, teachers need to focus on any biases or assumptions about gender in the planning of the activities for the year (Ferdum, 1994). It is usually the instructional design that is at fault because it perpetuates differences rather than accommodating for these differences among individuals (Arrighi, 1985). When planning activities that are not traditional, a need of empathy

needs to accompany the activities to ensure the success of the individual members of each group. Ferdum (1994) contends that each teacher should take his or her experiences and apply their creative powers to design lessons that fit the identity and the goals of the class.

At the beginning of the 20<sup>th</sup> century, women in athletics were starting to gain a little respect. By the end of the century however, females still are influenced by the patriarchal views and social constructs of a dominant sex (Nilges, 1998). As educational institutions turn into the 21<sup>st</sup> century, educators must start designing programs for students to allow for individual gain and group achievement. One of the fastest growing leisure activities for adults and students alike is rock/wall climbing. Many centers offer classes in rock climbing and the opportunity to experience the thrill of climbing a wall. In a PE class, this activity is being offered more often as an alternative to classic teaching topics in PE. There are some high schools that have climbing and bouldering walls in their gymnasiums. The first section of a wall climbing class is the use of teamwork and trust among the individuals. The trust of the group is built on team activities that force the students in situations that they would normally not experience such as trying to cross a “canyon” using only a rope and what they have on them. The objective, of course, is to safely have the “team” navigate the canyon. Students are encouraged to use any technique to achieve the objective. Activities like this allow for input of all the members and a natural sense of accomplishment when they finally finish.

Project Adventure is being tested in the junior high schools and is having success because of the support that the program is receiving in the schools that are testing this program. The program is designed to be interdisciplinary and requires a lot of planning by the teachers involved. However, the one key component to the success of this program is the involvement of the parents in all the activities that are planned (Dyson & O’Sullivan, 1998). The students

participate in units that are designed around a central theme. Some of the themes are centered on group processes and logic. All of the units allow each student and team to think laterally to solve various problems or situations that are posed. According to the research, one of the biggest and best parts about this system is the debriefing session that occurs after each team event. Each team member evaluates the team and their individual performance during the exercise. This evaluation is effective in assessing the effectiveness of the group but also to show growth among the groups and individual students. This partially eliminates the assessment based solely on strength and speed but more on logic and how teamwork can accomplish more than one individual. As teachers promote more activities that focus on cooperation rather than competition, students will have a better mastery of the skills but also trust in their peers (Geadelmann, 1981). The skills of internal reflection will allow each member to grow both mentally and physically by accentuating their strengths and working to limit their weaknesses.

The hope of all pedagogues is to allow students to mature as life long learners and to become masters using basic problem solving skills. This final program being discussed incorporates a mastery-learning climate while having a small section of Constructivist approach in the methodology. TARGET is being studied in high school situations and is receiving a lot of good marks by teachers and administrators. The acronym TARGET stands for task, authority, recognition, grouping, evaluation, and time (Valentini, Rudisill, & Goodway, 1999).

During the task section, the students and teachers must design tasks and instructional activities (also homework) that provide challenge to faster and slower learning students to foster mastery learning and goal setting of all the students. Authority is given to the students in their participation in the instructional process. They will be involved in decision-making and leadership roles in their group and the class. Also, this is the beginning of developing their self-

monitoring skills and management skills. Recognize the reasons and identifying opportunities to recognize the students' effort. The instructor and the students need to recognize individual progress and improvement while providing equal opportunities for each student to display their self-worth (Valentini et al, 1999).

There needs to be a logical way to vary the groups of the students and the their needs to be specific criteria that must be met to move on to the next section. Each group is usually heterogeneous and flexible by allowing the students input and choice on their group. During the year, there are multiple groupings that the students will be involved in to promote self-worth. The standards that the students need to meet, monitoring and evaluative feedback of their work comprise the evaluation of the team and individual (Marshall, 1997; Valentini et. al, 1999). Students participate in self-evaluations that are meaningful and then they discuss the results with the teachers in a private fashion to promote a safe environment and an evaluation that allows the students to improve on below average areas. Each person is responsible for maintaining the pace of the project. Time management skills, flexibility and pace are all accounted for with the students. The students must complete and design work schedules that help to ensure individual instruction. Their schedules should reflect time and opportunities for improvement throughout the exercise (Valentini et. al, 1999).

Once there is a stable environment, a sound curriculum and students who are willing to share new experiences, the teacher must take the helm and lead the class to a successful year. Teachers are blessed with the certainty that the students will show up on the first day of school; however, they have the uncertainty about the composition of the class. They also have the ability to design a classroom that is suitable and will maintain the attention of all the students. Teachers should be aware of biases when designing their classrooms with regard to the depictions of

people in posters (Bailey, 1996). Aside from the physical composition of the classroom, the students must realize that what they are doing is a prelude to the observed pastime of life. Therefore with that notion of lifelong learning experiences, the instructor must begin to place more emphasis on team play, group success, individual achievements and deviate away from competition as a major source of achievement (Bailey, 1996; Hedlund, 1999).

While designing the curriculum, the teachers need to focus on various learning styles and how males and females differ in successful strategies. Curriculum needs to be reinforced by other strategies to promote gender equities in the core courses (Woodward & Woodward, 1998). Teachers need to talk with counselors about establishing a positive support system for males and females (McKuen, 1998). The school should provide training seminars to assist the instructors with removing gender bias in the curriculum, textbooks, and biases that exist in other cultures (Chepyator-Thomson & Hutchinson, 1995; McKuen, 1998). Teachers need to focus on the fact that males and females learn by varying means and speeds and therefore the need to focus on allowing for mastery learning through group work and extra time to develop various skills in team play situations (Papaioannou, 1998).

During the units that involve physical contact (football, soccer, etc.) the department should have alternative programs for the females. The programs should parallel the boys program; except that the girls would not have to compete with the boys rather develop their skills and scrimmage against other girls (Henderson & Bialeschki, 1995). Along with the parallel programs, instructors need to provide an environment where students can feel safe not only on the playing field but inside the locker room. Encouraging the girls' self-esteem will allow them to have a more positive experience in PE. Hopefully, they will develop a sense of value for their

bodies and will develop a healthy relationship with their bodies that most people do not have in this world (Humbert, 1996).

The most essential part of teaching is how the teacher interacts with the students. First, the teachers need to discuss with the class common stereotypes and beliefs about males and females in PE and in social situations. Beyond the common slurs of students, the instructor needs to interpret sexist and derogatory comments and behaviors and then react to these situations in a manner that provides a learning experience and not perpetuate or tolerate a decorum that allows for comments like those to continue (Chepyator-Thomson & Hutchinson, 1995). Body language is just as important as verbal language. The proximity and postures that the teacher exhibits should be similar for both males and females. In a coeducational class, females usually do not get the attention that they deserve because the males usually monopolize the time of the instructor because they are looking for attention or because they are more active (Lirgg, 1994).

The largest step in this process of change is recognizing that their needs to be some change and the course of action that must be taken. Each instructor has a direct effect on the tone of the class and the opportunity to display positive models that both male and female students can follow throughout their lives (Arrighi, 1983; Ashenden et al., 1985; Paechter & Head, 1996). A model of eliminating abusive verbal language and providing varied but equal amounts of verbal and non-verbal interactions between the students and the teacher. Moreover, all students should leave the classroom with positive experiences that allow them to grow physically, psychologically, and emotionally to promote life long learning and acceptance of other people.

The American Association of University Women (AAUW) Educational Foundation has written many reports about the equity of education for women. Their initial research pointed to inadequacies in achievement for females compared to males. Since 1992, they have found evidence to support when good elements of education are present (small classes, equitable teaching practices, and focused academic curriculum), males and females succeed at the same rate (AAUW, 1992; Schroeder, 1998). The AAUW has stated that the achievement gap has shrunk in a lot of the core classes; however, to eliminate bias in a classroom or in people requires a change that most schools cannot accomplish. Schools do not spend enough time discussing and possibly changing the attitudes of the students to foster acceptance and impede prejudices based on gender, race, etc.

#### Project Objectives and Processes

As a result of modifying instructional delivery during the period of September 2000 to January 2001, the grade 9 through grade 12 physical education classes will increase in skill development and knowledge as measured by teacher/student surveys, teacher-made tests, skill and fitness test, and checklists.

In order to accomplish the terminal objective, the following processes are necessary:

1. Curriculum units will be developed that will utilize the abilities of higher skilled students to mentor/tutor lower skilled students of the same gender. Ability grouping for males and females will allow the students the opportunities to learn the skills they need to learn in a less threatening environment. Students will be separated into groups that are equal in skill and knowledge and will foster peer learning and mentoring during the skill development phase.
2. Team building activities will be designed that will enhance their attitudes towards gender bias and teamwork.



3. The classroom setting will be modified where possible to accommodate separate skill levels along the gender lines to foster trust and respect of the students with each other and the staff.
4. Activities will be used to form positive self-images and esteem of the students by demonstrating their abilities to actively participate and contribute in a team/individual situation.

### Project Action Plan

The educators have identified the objectives that they wish to accomplish, and have conducted a complete literature and review of the literature. Following is an outline of the activities recommended by knowledgeable others and modes of assessment that the researchers are going to have the students participate in.

#### I. Individual skill development through cooperative means

The students will learn the following skills throughout the first 18 weeks of the year. Each class is 50 minutes in length; however, there are 15 minutes allotted for changing both before and after class. On Monday, Wednesday and Friday the students will run during class for 9 minutes following stretching. The first week of the first semester will be orientation and the students will receive lockers, learn grading procedures, learn the daily stretches and visit the facilities. Every 2 weeks the student will be involved in a student evaluation that will include an individual assessment, listing the things that they liked and disliked about the unit, and what knowledge they have gained. The last day of each unit, the students will take an objective test. Following the exam, the students will receive anonymous surveys pertaining to delivery style and content objectives.

- i. Basketball—Tuesday and Thursday, the first 15 minutes will be devoted to skill work and drills. The last 20 minutes will consist of game play. The unit will last for 3 weeks.

- a. Shooting technique (See sample curriculum unit in Appendix K)
  - b. Dribbling
  - c. Passing
  - d. Team play
- ii. Team building—Grades 9 and 10 will participate in a 1-week unit. They will be graded on participation and cooperation. Grades 11 and 12 will have 9 weeks of team building. This time will include trust activities that will prepare them for the wall-climbing unit. Every 3 weeks, they will due an evaluation about grading themselves and skills that they learned.
  - a. Problem solving
  - b. Conflict resolution
  - c. Cooperative learning
  - d. Other lifetime skills (See Appendixes H, I and J)
- iii. Wall climbing and bouldering—Grades 11 and 12, this will be a 9-week course that precedes the team building unit. The first week will be devoted to how to tie knots, belay and various climbing techniques that the students will use the rest of the unit. The students will take a unit test at the end of the semester.
  - a. Strength development
  - b. Climbing techniques
  - c. Belaying
  - d. Knot tying and safety concerns
  - e. Anchoring

## II. Team building activities

- A. Small group
- B. Large group
- C. Individual work
  - i. Lifelong skills
  - ii. Confidence in a group
  - iii. Goal achieving
  - iv. Respect of other students thought processes

### III. Classroom setting

#### A. Individual break out sessions

- i. Put students with an instructor or a peer and work on the skills
- ii. Have the students instruct a topic or skill to the entire class
- iii. Help to foster confidence with the students and their skill development

#### B. Separation of male and female students

- i. Through game play
- ii. To promote peer tutoring
- iii. Develop skills through non-threatening situations

#### Methods of Assessment

The students will participate in random questionnaires about their opinions of the course and the methodologies that are applied in the course. Rubrics will be constructed to rate the students during the team building, bouldering, and wall climbing units to provide active and quick feed back to allow for improvement of skill levels for the students and the team. Students engaged in these non-traditional forms of PE have positive aspects on confidence in the students and a less likelihood of gender bias because groups would have been formed by ability grouping and not by traditional methods of grouping students (height, weight, birthday). Following the assessments, the students will provide self-assessments during a debriefing after the team activities to discuss the teams' effectiveness with the given objectives and how they can improve for the next activity.

## CHAPTER 4

### PROJECT RESULTS

#### Historical Description of Intervention

The objective of this project was to improve the students' attitudes about gender issues in the classroom. The implementation of varied instructional strategies was used to provide the students with different instructional modes to determine if they preferred mixed or same gender groups.

Cooperative learning strategies were used to help improve the skill development of our students. Students with high skill levels were partnered with students of low abilities to foster peer mentoring. The groups were designed by both gender and skill development (Arrighi, 1983; Valentini et al. 1999). The initial phase was to determine the skill level of each of the students in the units. This occurred on the first day of the new units. Then, students were paired up with a partner for approximately 2 weeks to improve on skill development and foster efficacy among the students in class. Proceeding the 2 weeks, students were then divided into teams to take part in team play. In each session, 25 – 30 minutes would be devoted to the individual attention of the students' skill development. See a sample lesson plan for skill development in Appendix K.

Besides cooperative learning strategies we implemented team building with the students during the beginning of the wall-climbing unit. There were 9 weeks of group and individual initiatives and then 9 weeks of wall climbing. In the initiatives, the students encountered

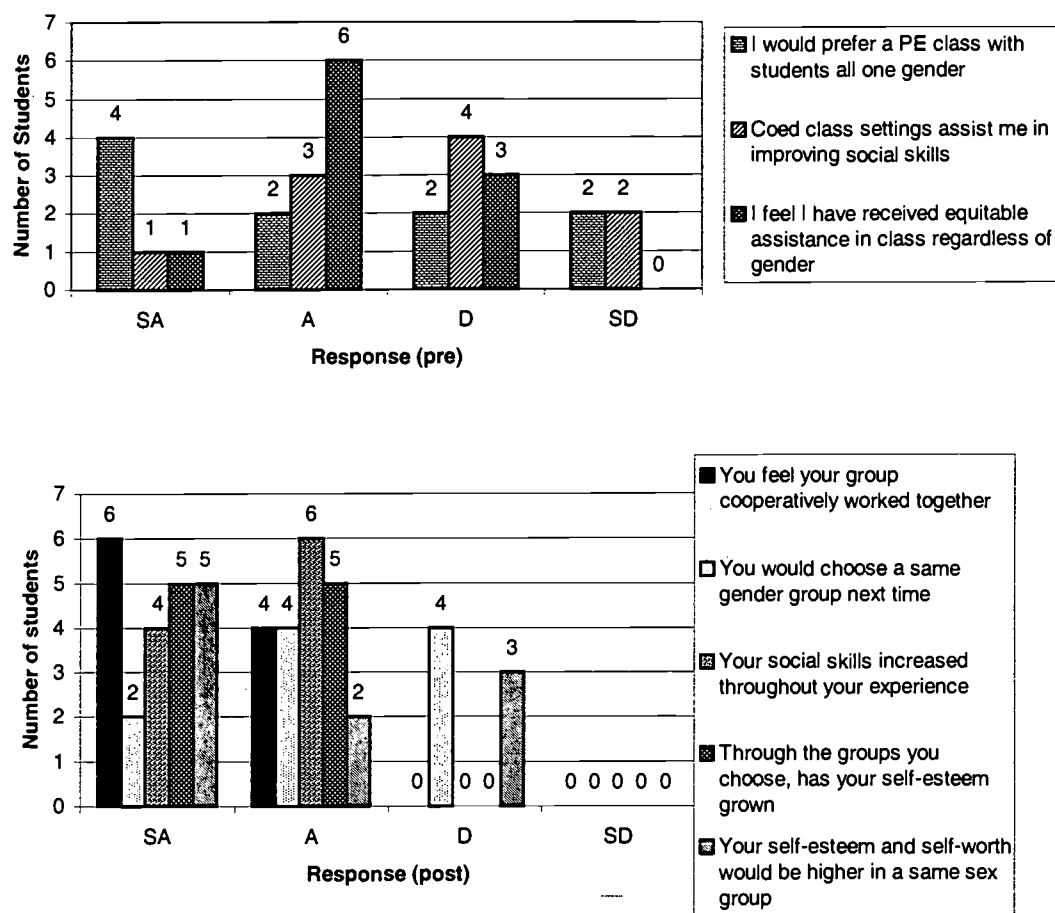
situations where they worked on trust, cooperation skills, decision-making, conflict resolution and self-awareness. The individual skills that they worked on were life-long learning skills, confidence in self and in groups, goal setting and achieving, and respect for other students' thought processes.

During the first 9 weeks, the students were involved in a variety of activities that allowed them to use divergent and convergent thought processes to achieve a goal for the group. Some sample activities will include "Swamp Crossing," "Toxic Waste," "Nitro," and "River Walk," "Human Impulse," "Ball Toss," and "Minefield." See sample lesson plans in Appendixes -H, I, and J.

In the second 9 weeks, students began their wall-climbing and high rope experience. Students constructed their own groups that they kept for the wall-climbing unit. Students learned the basic commands and basic maneuvers of wall climbing, belaying, bouldering, and high rope. Assessments were given on how to set up their climb, technique of climbing and belaying, and verbal commands and communication in the group. The wall-climbing unit concluded our gathering of data for the research processes due to the end of the semester.

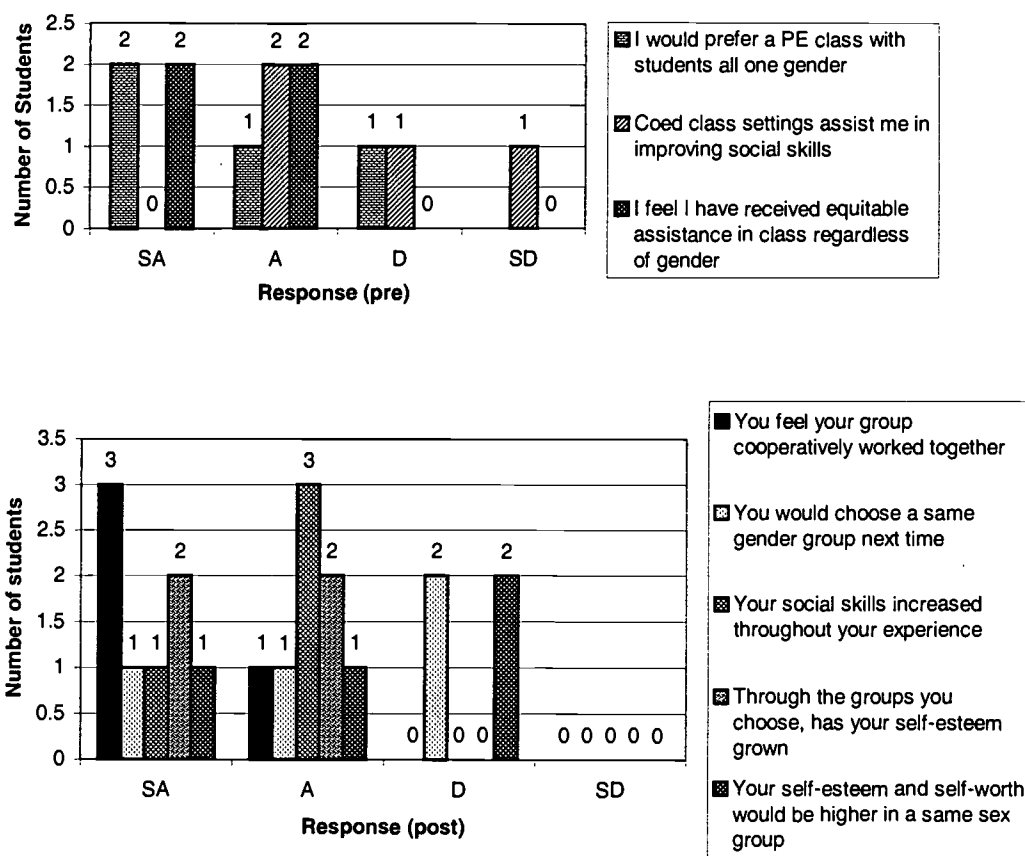
Classroom setting was modified by allowing for individual breakout sessions for skill development and then through the grouping of students in the trust and team building activities. Students were divided into heterogeneous groups by various means of separation such as birthdays, abilities, age, gender, heights, etc. This allowed our students to engage with other students of varying abilities and beliefs.

## Presentation and Analysis of Results



**Figure 3.** Female data after intervention. In this study, 100 % of the females surveyed found that their self-esteem improved with the groups they choose, teamwork increased, social skills increased, and their groups worked cooperatively together. The overwhelming response by the females is a positive response to the intervention plan of cooperative models and peer modeling. However, some, 3 out of 10, would still feel that their self-esteem and worth would be lower in a classroom of the same gender. Also, 4 out of 10 females would choose to have a coed group next time instead of a homogeneous gender group. This could be explained by the unwillingness of some of the females to do some of the “manual” work required in team building. The results positively correlate to a better atmosphere for the females to be successful and feel less

threatened than in a traditional classroom. This is supported by the fact that the groups they choose were mainly all female. All the females sampled agreed that they had a higher self-esteem and would not choose separate gender groups for future team-building activities.



**Figure 4.** Male post student data. In the post surveys, the students indicated that they would not want to choose same gender groups next time, 3 out of 5. However, their concepts of teamwork, social skills and self-esteem have grown from the groups that the students chose. Only one person in the study said that his problem solving skills did not improve; however, another achievement of the intervention is how the students were able to work together and achieve the goals and objectives laid before them and solve the problems with problem solving. The 3 males who disagree that their self-esteem and worth would be higher in a same gender class would

probably have chosen that because of skill development and the level of competition that they would face in the same gender class.

During the debriefing session following the last day of the semester and the units, the students filled out a comment sheet about their experiences in team building. The results are in Appendix L. A common theme behind the debriefing was the sense of ownership from the students but also the interest that they had in the experience. Their perceptions of their fellow classmates changed by being more engaged with a broader portion of the class. All of the students discussed how they preferred this PE class versus the traditional PE class. Also, some of the students, especially males, talked about how they did not have to worry about their athleticism rather they were given the chance to incorporate their intelligence over brute strength in PE. This allowed those males and their teams to exploit the individual expertise of the team. A mixture of students and their intelligences has led them to rediscover who they are and the people around them.

### Conclusions and Recommendations

After conducting a thorough analysis of the data, we have concluded that the students' attitudes on gender bias and gender discrimination is not as prevalent as it was thought to be at the onset of this research. Covering the semester of work that the students completed and engaged in, yielded beliefs that students preferred to be in mixed gender classes and groups compared to homogeneous gender groups. The teacher initiatives that provided varied modes of instruction have equipped the students with the abilities to recognize their necessity to engage with other students and not live by gender stereotypes.

Some recommendations that we have are to first provide the students with the opportunity to choose the section of physical education that they would like to be in especially



whether they would prefer a same gender section or mixed gender section. Second, we would suggest that faculty members go to training seminars on gender equity and biases. They should learn varied instructional techniques to allow the students to engage more with each other and allow for peer mentoring with students. Peer mentoring will help the students increase their skill development. Figures 3 and 4 show that both male and female students agree with increasing skill development through small group instruction that translates into greater self-esteem and confidence. Also, students did not perceive any biases in the classroom after new instructional strategies were implemented. Therefore, the students benefited from the peer-tutoring model and when they were more involved in the selection process of their teams and partners for wall climbing.

As noted earlier by the literature, an environment that is sterile in competition but high in teamwork will foster not only higher skill development but also a higher self-efficacy in the students. The students designed the small groups that were used in team building and they usually grouped themselves into partners of similar skill levels. This supports the literature concerning ability grouping and demonstrates that teachers should begin grouping students not by traditional means, but by ability groups for each athletic program. The instructional environment was manipulated to allow males and females not to see the differences in strength or speed but the ability to work well with each other. These trust activities transcended into the wall-climbing units with students feeling no threats or intimidation from other students. Some students even commented that they would rather have team building throughout the year to promote learning about their classmates and themselves. Small group instruction is not the cure for a gender problem, but it is a great foundation in which to build on. Small group instruction can lead to larger groups being formed to facilitate a more heterogeneous mixture of students,

where male and female students are not perceived as strong or weak, but are valued not only for their physical but their mental prowess.

With PE being a graduation requirement, some schools are investigating alternatives to the standard PE curriculum. Various choices such as dancing, wall climbing, fitness center, and other alternative programs are being investigated. Students who are given different choices for PE will be more likely to apply themselves and fulfill the objectives, thereby having better experiences in class.

To facilitate the new programs, the faculty will have to attend seminars to train them about the programs and apparatus that must be used by the students. This will provide faculty members with the chance to increase their instructional materials and variety of instructional strategies as well as serve as a resource network for help on other programs. Seminars or lectures will also allow the educators to perceive how it is to be back in school after taking some time away from school.

Another recommendation is that the research may want to be continued at this time. The intervention allowed the students to strive for greater skill development and attitudes and decrease gender bias. The faculty in this study supported a willingness to provide separate gender classes as a request from both male and female students. With the content of the intervention, instructors need to identify the parts of their curriculum that may contain gender specific content and provide the best mode of instruction for their students. This also will be facilitated on the district level to provide continued assessments on the faculty. Students need to function in a heterogeneous group with peer tutoring and mentoring of skills as a driving force for their physical, emotional, and social development.

To provide more validity for this study or any other study regarding bias or discrimination against students, a larger sample of data needs to be presented. With the small number of participants, the small population size could have affected the results by allowing some bias to exist because there is not a large enough sample to accurately determine the mindset of the subjects. More students sampled will allow for an accurate picture of the situation regarding bias and discrimination at the facility.

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## APPENDIXES

## APPENDIX A

## Pre intervention student survey

## STUDENT SURVEY

Directions: For each of the following, please place an X in the response that best describes your feelings. **DO NOT PLACE YOUR NAME ON THE SURVEY.** Thank you for participating in our survey about your classroom and your experiences.

## 1. Gender

Male                  Female

## 2. Grade Level

9                  10                  11                  12

Responses to questions	Strongly agree	Agree	Disagree	Strongly disagree
I would prefer a PE class in which all students are the same gender				
In this classroom situation I feel that I have developed my skills				
I feel I have received equitable assistance in class regardless of my gender				
I have given my best effort in this class				
My knowledge of fitness has increased throughout this class				
Coed class settings assist me in improving my skills				



## APPENDIX B

## Post intervention survey

Directions: For each of the following, please choose the answer that best represents your feelings about the given question. DO NOT WRITE YOUR NAME ON THIS SHEET.

## 1. Gender

Male

Female

## 2. Grade

9

10

11

12

Responses to Questions	Strongly Agree	Agree	Disagree	Strongly disagree
You feel your group cooperatively worked together.				
You would choose a same gender group next time.				
Your social skills increased throughout your experience				
Your concept of teamwork has increased.				
Through your group, your problem solving abilities increased.				
Through the groups you choose has your self-esteem grown.				
Your self-esteem and self-worth would be higher in a same sex group.				

## APPENDIX C

## Faculty Survey

## TEACHER SURVEY

Directions: For each of the following, please circle the response that best describes your feelings. DO NOT PLACE YOUR NAME ON THIS SURVEY. Thank you for participating in a survey about our school.

## 1. Gender

MALE          FEMALE

2. Number of years teaching: \_\_\_\_\_

3. Number of years teaching at Leyden High School: \_\_\_\_\_

4. Grade levels taught: \_\_\_\_\_

5. Have you ever taught a class in which all students were the same gender? \_\_\_\_\_

If YES,

This instructional setting increases student's social skills, skill development, fitness levels and participation

Strongly agree

Agree

Disagree

Strongly disagree

If NO,

Coeducational classrooms would benefit students' social skill development.

Strongly agree

Agree

Disagree

Strongly disagree

## APPENDIX D

## Parental consent form

Dear parent or guardian,

We are writing to ask you for your permission for your student to be a part of a research study. Those students who will be participating in the study will be exposed to a variety of instructional and assessment strategies such as: cooperative learning, surveys and student journals. Your student will remain anonymous throughout this research and all results and conclusions will remain confidential.

Please sign and return the bottom portion of this letter with your son or daughter to class by November 2, 2000. Regardless of their participation in the study, they will not miss out on any instructional activities. Also, their grade will not be affected by participation in this study. If you have any questions, please call the school at and ask for either Tim Stark or Bradley Henning. Thank you for allowing your son or daughter to participate in this important study.

Sincerely,

Timothy Stark Bradley Henning

-----  
 \_\_\_\_\_ I want my child, \_\_\_\_\_, to take part in this study.

\_\_\_\_\_ I do not want my child, \_\_\_\_\_, to take part in this study.

Parent/Guardian signature: \_\_\_\_\_ DATE: \_\_\_\_\_

Student signature: \_\_\_\_\_ DATE: \_\_\_\_\_

## APPENDIX E

To: Dr. Robert Johnson  
From: Bradley Henning and Timothy Stark  
Re: Research project in school

Dear Dr. Johnson,

We are currently enrolled at Saint Xavier University in the Field Based Masters Program with our anticipated graduation date of May 2001. We are asking you to grant permission so we can conduct research in our classes. Tim and I would be collecting preliminary data at the beginning of this current school year (2000 – 2001). We are planning an action research project dealing with gender bias and the achievement and engagement of the students in our classrooms. Faculty and two student surveys will be distributed at the beginning of the school year, and the post-surveys will be distributed before the end of the first semester. Enclosed is a copy of the parental consent form that the students will take home and have their parents sign. If you would like to discuss the project with us, please contact us and we can set up an appointment to meet. Thank you for your time and consideration.

Sincerely,

Bradley Henning

Timothy Stark

## APPENDIX F

## Checklist for wall climbing

Name	Essay	Written	Boulder	Knot	Climb	Belay	Total
	Max 20	Max 86	4	4	4	4	122
Male	15	67	3	4	4	4	97
Male	9	44	3	4	4	4	68
Male	19	66	4	4	4	4	101
Male	13	30	4	4	4	4	59
Female	10	47	3	4	2	3	69
Female	11	62	4	4	4	3	87
Female	2	43	3	4	2	4	58
Female	5	41	4	0	3	3	56
Female	4	40	0	4	2	0	50
Female	11	64	4	3	3	0	85
Female	8	27	2	4	1	4	46
Female	20	72	4	4	4	4	108

Students are given a (4) for superior knowledge, a (3) for above average skill level, a (2) for average skill levels, a (1) for below average skill level and a (0) for needs remediation and cannot participate.

## APPENDIX G

## Checklist for basketball

Students name	Dribbling	Shooting	Passing	Team-play same sex	Team-play co-ed
Male	3	2	3	4	3
Female	2	1	2	4	2
Female	2	2	3	4	3

Dribbling, shooting, passing, team play, lay-ups

Students are evaluated on the following scale:

4 = means Excellent

3 = means Acceptable

2 = means Average

1 = means Below Average

## APPENDIX H

Timothy Stark  
Lesson Plan  
Team-building

## **MINE FIELD**

**Behavioral Objective:** The students will understand the importance of trust, communication, and listening skills.

**Goals:** The student must successfully go through the minefield without touching a plastic cup. The student who is going through the minefield must be blind folded and guided by a trusting partner.

**Facility/Equipment:** -A gymnasium or large spaced area  
-400 plastic cups  
-Blindfolds  
-Snickers candy (optional)

**State Goals:** -21-Develop team-building skills by working with others through activity.

-24-Promote and enhance health and well being through the use of effective communication and decision-making skills.

### Activity 1:

1. Have the student's partner up with a fellow classmate that he or she doesn't know. Mark off a certain area where the minefield is to be. Give the student's 30 seconds to set up the plastic cups in the marked off area (mine field). •
2. Line up the partners in rows of eight and two groups deep across the minefield. The instructor then tells the partners to raise the hand of the partner with the earlier birth month. That partner is to be blind folded first. The other partner is to guide their partner through the minefield by having his/her hands on their partner's shoulders. The partner cannot remove his/her hands from their partner's shoulders. Talking is allowed, but the partner guiding, cannot push their partner which way to go. However, they can tell them which way to go.
3. They can only tap on the right shoulder to go right, or tap on the left shoulder to go left. Once a student touches a mine (cup), that student must start over at the beginning. Once the student successfully gets through the minefield, then the other partner tries.

4. Once everyone has gone through the minefield, then activity 2 will be started.

Activity 2:

1. Same rules as activity 1 except, NO TALKING. The gymnasium should be completely silent.
2. The instructor will give the students 1 minute to decide how they are going to communicate. (Ex. Tap once on right shoulder means go right, 2 taps mean just a little right, tap on the head means to step over the mine (cup), etc.)

Activity 3:

1. Add snickers candy to reward the students for a good job. The instructor will put snickers all around the minefield and the blind folded student will have to pick-up the candy without touching a mine. If the student successfully picks up a piece of candy and then touches a mine, that student must then drop his/her snickers back into the minefield.
2. When a student successfully grabs a snickers candy and makes it through the minefield, that student can keep the snickers to eat. At the end of class give the students 30 seconds to pick-up all the cups.
3. The instructor states one last rule. If there's one snickers wrapper on the floor, everyone must give back his or her snickers.

Debriefing:

- Did you have fun?
- Did you have a difficult time trusting your partner?
- Do you have a better understanding of what blind people go through?
- What could have been done to make the activity better?



## APPENDIX I

Timothy Stark  
Lesson Plan  
Team-building

**BALL TOSS**

Behavioral Objective: The student will understand the importance of Communication, Listening, and Team-building skills.

Goals: To have the students follow a pattern of calling a classmates name, tossing the tennis ball underhand to the person they called, and successfully continue this until everyone has called a name and caught the ball. If the ball touches the floor, then the same pattern must be started over again.

Facility/Equipment: A gymnasium or a large spaced area and 15 tennis balls

State Goals: 21-Develop team-building skills by working with others through physical activity.  
24-Promote and enhance health and well being through the use of effective communication and decision-making skills.

Safety: -Must underhand toss the ball  
-Must have gym shoes that are tied  
-No horseplay

Activity 1: The instructor will choose a student to start the ball toss circle. The class will get in a circle, standing up. The starter will say a classmate's name and then underhand toss the ball to that classmate. The starter, or any student with the ball, cannot toss the ball to someone next to him or her. In order to toss the ball, the student must first say the name of the classmate they are tossing the ball too. This will continue until everyone in the circle has tossed and caught the ball. Students can only catch and toss the ball one time. If the ball ever touches the floor, or if a student touches the ball more than twice (except the starter), the pattern starts over again. The last person to catch the tennis ball must say the starter's name and toss the ball to the starter. Once everyone has caught and tossed the ball correctly, and the starter has ended up with the ball, the first activity is completed.

Activity 2: Have the students repeat activity 1, except this time the instructor will time the group. See if the students can beat their time.

Activity 3: Add a ball to the group. Same pattern and same rules apply. The only difference is now there is 2 balls in the circle.

Activity 4: Add another ball, making it 3 balls. Same pattern and same rules apply. Then make it 4 balls, 5 balls, 6 balls, etc.

Debrief: -Did you have fun?

-What was difficult about this activity?

-What was easy about this activity?

-What was the most important skill you needed in this activity? (Communication, listening, teamwork, etc.).

## APPENDIX J

Timothy Stark  
Lesson Plan  
Team-building

## HUMAN IMPULSE

**Behavioral Objective:** The student will understand how to be alert and trust others through an activity.

**Goals:** To send the impulse through the group and have the end people successfully grab the object at the end. The first group to go through every team member in the group wins.

**Facility/Equipment:** -A gymnasium or large spaced area  
-An object for the students to grab  
-A coin with two different sides on it

**State Goals:** 21-Develop team-building skills by working with others through activities.

**Safety:** -No horseplay  
-Everyone must have gym shoes on and make sure the laces are tied

**Activity:** The students will be split up into even groups (Example, 2 groups of 12 for a 24-student class). The instructor will have each group line-up in a straight line facing each other about 4 feet apart. The students will then sit down in an Indian style form connecting hands.

The entire group will have their eyes closed except for the first person in each group. There will be an object placed in the middle of the end people. The instructor will flip a coin in front of the first person in each row. If the coin is "heads", then the first person squeezes the hand of the person next to them and that person squeezes the hand of the person next to them, etc. Once the person at the end feels someone squeeze their hand, that person then quickly grabs the object that was placed in between the two end people. The winner then goes to the front of the line. The first groups to have everyone go through the line once, wins.

If the instructor flips "tails", then no one should squeeze hands. The group that squeezes hands is at fault. The first person in the group must go to the end of the line instead of the last person going to the front. Now that group is behind one person. Remember the first group that gets everyone through the line wins.

- Debriefing: -Did you have fun?  
-What could have been done to make the activity better?  
-What did you find difficult about the activity?  
-Did you mind closing your eyes?

## APPENDIX K

**Name of Activity / Task:** Basketball Golf

**Concept being Taught:** Shooting

**Purpose of Activity:** Make shooting fun and competitive. Give students various range/difficulty to shoot a basketball

**Suggested Grade Level:** 9-12

**Prerequisites:** Proper technique for shooting a basketball set shot/ jump shot

**Materials Needed:** Index cards with hole and par numbers on them (i.e. Hole 1, par 2 or Hole 2, Par 3), basketballs (One per group), score cards (like miniature golf), and pencils/pens to keep score.

### Description of the Activity

Before class, tape index cards to floor around the gym. The whole numbers should begin with 1 and move clockwise around the gym with par 1 cards close to the basket, par 2's near the foul line, and par 3's near the three-point line. When setting up the course use all baskets in your gym. We have 6 baskets in our gym so the students make 3 clockwise circles around the gym. Make sure they move to the next basket after completing one "hole". Students complete the "Par 3 Hole 1" before moving to the "Par 2 Hole 2" at the next basket. Each group starts at a different basket (shot gun style). If one group starts at hole #15, they then play hole #16 at the next basket and so on. Students get into groups of 3 to 4, are assigned a basket to start at, and take a basketball, pencil and scorecard. Give them a max of 5 shots/hole. On their scorecard write down the number it took to make the basket. You are looking to finish with the lowest score. After all holes are completed, have the students total their scores. Make sure the students shoot from the sides of the cards. If they stand on them, they will tear off. Two groups then can shoot on either side of the card at one time. Walk around to make sure they are moving in the right direction and are filling out the scorecard properly. Enjoy!

**Assessment Ideas:**

On back of their scorecards, have students write cues for shooting the basketball.

**Adaptations for Students with Disabilities:**

Place a hula-hoop under the baskets to use as holes for physically challenged students.

**Name of Activity / Task:** Lincoln Avenue Basketball

**Concept being Taught:** Dribbling/Basketball

**Purpose of Activity:** To gain practice in incorporating the various skills and strategies associated with basketball. This activity can also be used to introduce different offensive and defensive strategies to students (e.g., offensive skills such as keeping one's body between the ball and the opponent; defensive strategies such as moving between the ball and the intended target and using one's body and arms to guard the opponent).

**Suggested Grade Level:** 6-12

**Prerequisites:** The ability to move and dribble a ball with control while keeping it away from an opponent; to pass a ball using various types of passes; to shoot toward an intended target.

**Materials needed:** 1 basketball; 2 basketball hoops; colored floor tape; pinnies for one group

### **Description of the Activity**

Using floor tape, divide the gym into two equal lanes lengthwise. Then, divide the gym into quarters width-wise. This will give you eight **rectangles**.

Before play begins, introduce or review one particular skill or offensive or defensive **strategy** with students which will help them to play this game more successfully. Let students know you want them to be trying to use this skill or strategy whenever possible.

Then, divide the class into two groups (e.g., the "blues" and "reds"). Have one group wear the pinnies. Then place one student from each group in each rectangle. The remaining students are placed anywhere around the **base/sidelines**. Designate a basket that each team will shoot toward.

Once play begins, the students in the rectangles may **dribble, shoot** or **pass** the ball to other players in the rectangles or side/baselines, in order to move the ball to their side of the court and shoot a basket. When a player doesn't have the ball, he/she plays defense against their opponent in the rectangle. Students in a rectangle may not leave this space, or it is called a **turnover** and the other person in their rectangle receives the ball.

The students on the side/base lines may receive a pass from a teammate in a rectangle or on the side/baselines and may also shoot at the basket. However, they may take only **three dribbles** and then must pass or shoot. Also, no player in a rectangle or side/baseline may guard a student that is in possession of the ball on the side/baseline. Students are free to roam anywhere on the side/baselines, but may not enter a rectangle or again, it is a turnover.

After a few minutes **rotate** the students in the rectangles clockwise. One pair will now come out of the rectangle and to the side/baseline, and one pair of students will replace them from the side/baselines. If necessary, review an offensive or defensive strategy or skill that you observe

students need to focus on. Begin play again. Continue to rotate students every few minutes so that all students have a chance to play in each rectangle.

### **Variations:**

You may decide to make teams ahead of time, pairing students with like abilities in each rectangle. This gives each student a chance to be successful against students of his/her own ability.

If students are of similar physical abilities, you can have one team rotate clockwise and the other team rotates counter-clockwise. This will give different pairings each time a rotation is made.

If your facility has one large court, make more rectangles on the floor to involve more students on the court itself. Instead of six rectangles, try eight or ten.

It is not suggested that you add more students in a box, above the original two. This creates a lot of congestion and can be dangerous.

## APPENDIX L

## Post data, female

	SA	A	D	SD
You feel your group cooperatively worked together	6	4	0	0
You would choose a same gender group next time	2	4	4	0
Your social skills increased throughout your experience	4	6	0	0
Your concept of teamwork has increased	4	6	0	0
Through your group, your problem solving abilities increased	5	5	0	0
Through the groups you choose, has your self-esteem grown	5	5	0	0
Your self-esteem and self-worth would be higher in a same sex group	5	2	3	0

## Male

	SA	A	D	SD
You feel your group cooperatively worked together	3	2	0	0
You would choose a same gender group next time	1	1	3	0
Your social skills increased throughout your experience	1	4	0	0
Your concept of teamwork has increased	2	3	0	0
Through your group, your problem solving abilities increased	3	2	1	0
Through the groups you choose, has your self-esteem grown	2	3	0	0
Your self-esteem and self-worth would be higher in a same sex group	1	1	3	0

## Pre-Student Data (before intervention)

## Female

	SA	A	D	SD
I would prefer a PE class with students all one gender	4	2	2	2
In this classroom situation I feel that I have developed my skills	1	4	3	2
I feel I have received equitable assistance in class regardless of gender	1	6	3	0
I have given my best effort in this class	3	5	2	0
My knowledge of fitness has increased throughout this class	0	3	6	1
Coed class settings assist me in improving social skills	1	3	4	2

## Male

	SA	A	D	SD
Prefer one gender PE class	2	1	1	
In this classroom situation I feel that I have developed my skills	1	2	1	0
I feel I have received equitable assistance in class regardless of gender	2	2	0	0
I have given my best effort in this class	1	2	1	0
My knowledge of fitness has increased throughout this class	1	2	1	0
Coed class settings assist me in improving social skills	0	2	1	1

## Faculty Survey

	SA	A	D	SD
Male (8)				
# of years teaching (average)	15.6			
# of years at school (average)	11.5			
Grade levels taught	All			
Have you ever taught a one gender classroom	5 yes	2	5	1
	3 no			0



## Faculty Survey

Female (2)

SA      A      D      SD

# of years teaching (average)	27			
# of years at school (average)	27			
Grade levels taught	All			
Have you ever taught a one gender classroom	2 yes		1	1

Anecdotal records by students after team building for the juniors and seniors:

Female responses

- Usually classes are so repetitive –all the team sports that half the class loves and the other half hates. This has a lot of variety and helps students build socially.
- I enjoy team building rather than just playing the same old sports, the team building games are a lot of fun.
- I enjoyed how we play a lot of games and do a lot of activities that help communicate more with people. I have enjoyed the cooperation and the team building the way it is working out in this class.
- I've learned to trust my peers and become better friends as a class. Team building has brought the whole class together.
- It helps me with my teamwork gained trust with my peers and fellow classmates that I did not know before this class. I am so glad that I have a class to look forward to like this one.

Male responses

- Wall climbing is considerable more interesting. I enjoy the freedom and not feeling like the teaching is ordering me to participate. The activities are different and not competitive. I like the fact we don't compete but reach for a common goal. Team building is nice because I like working with individuals and getting to know them better instead of people being a number on a team.
- I like this class because I already know that I am a great physical body, now I get to use my mind in gym class.
- I don't have to be an athlete I like using my mind like using the team building.
- I like the way that we are allowed to choose as an individual as opposed to doing what the team wants.
- It has taught me to trust people that I don't like or that I don't know very well.
- I've learned to think and work together with people that you would never play something like basketball. It's fun and entertaining to do something that most schools never except regular gym class.



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